

U.S. Patent Application Serial No. 09/960,401  
Amendment filed January 31, 2005  
Reply to OA dated November 1, 2004

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1           Claim 1 (currently amended): A method of producing a color filter,  
2 comprising: forming pixels on a transparent substrate using a colored composition containing (a)  
3 an amino resin having a carboxyl group and/or a phenolic hydroxyl group, (b) a pigment, [[and]]  
4 (c) an organic solvent, and (d) a compound having a photopolymerizable functional group, which  
5 is a polyfunctional (meth)acrylate and/or a polyfunctional maleimide, by an ink-jet printing  
6 method; and curing photocuring the pixels; and then heat-curing the photocured pixels.

1           Claim 2 (original): The method of producing a color filter according to claim 1, wherein  
2 the amino resin (a) having a carboxyl group and/or a phenolic hydroxyl group is an amino resin  
3 obtained by condensing (a-1) (4,6-diamino-1,3,5-triazin-2-yl)benzoic acid with (a-2) at least one  
4 aldehyde compound selected from the group consisting of formaldehyde, glyoxylic acid,  
5 succinsemialdehyde, and hydroxybenzaldehyde.

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1       Claim 3 (original): The method of producing a color filter according to claim 1, wherein  
2       the amino resin (a) having a carboxyl group and/or a phenolic hydroxyl group is an amino resin  
3       obtained by condensing (a-3) at least one triazine compound selected from the group consisting  
4       of melamine, benzoguanamine, and (4,6-diamino-1,3,5-triazin-2-yl)benzoic acid with (a-4) at  
5       least one aldehyde compound selected from the group consisting of glyoxylic acid,  
6       succinsemialdehyde, and hydroxybenzaldehyde.

Claims 4- 8 (canceled).

1       Claim 9 (previously presented):     The method of producing a color filter according to  
2       claim 1, wherein the amount of (b) the pigment in the colored composition is within a range of  
3       10 to 70% by weight based on the non-volatile content in the colored composition.

1       Claim 10 (previously presented):    The method of producing a color filter according to  
2       claim 1, wherein the average particle diameter of (b) the pigment is within a range of 0.005 to 3  
3        $\mu\text{m}$ .

1       Claim 11 (previously presented):    The method of producing a color filter according to  
2       claim 1, wherein the average particle diameter of (b) the pigment is within a range of 0.01 to 1  
3        $\mu\text{m}$ .

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1           Claim 12 (previously presented): The method of producing a color filter according to  
2       claim 1, wherein the amount of (c) the solvent is within a range of 1 to 19 parts by weight based  
3       on 1 part by weight of the non-volatile content in the colored composition.

1           Claim 13 (previously presented): The method of producing a color filter according to  
2       claim 1, wherein (c) the solvent has a boiling point of 80 to 200°C.

1           Claim 14 (previously presented): The method of producing a color filter according to  
2       claim 1, wherein (c) the solvent is at least one selected from the group consisting of aromatic  
3       solvents including toluene, xylene, and methoxybenzene; acetic acid ester solvents including  
4       ethyl acetate, butyl acetate, propylene glycol monomethyl ether acetate, and propylene glycol  
5       monoethyl ether acetate; propionate solvents including ethoxyethyl propionate; alcohol solvents  
6       including methanol, ethanol, propanol, and ethyleneglycol; ether solvents including  
7       butylcellosolve, propylene glycol monomethyl ether, diethylene glycol diethyl ether, and  
8       diethylene glycol dimethyl ether; ketone solvents including methyl ethyl ketone, methyl isobutyl  
9       ketone, and cyclohexanone; aliphatic hydrocarbon solvents including hexane; nitrogen compound  
10      solvents including N,N-dimethylformamide,  $\gamma$ -butyrolactam, N-methyl-2-pyrrolidone, aniline,  
11      and pyridine; lactone solvents including  $\gamma$ -butyrolactone; and carbamic acid esters.

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1           Claim 15 (previously presented): The method of producing a color filter according to  
2        claim 1, wherein (c) the solvent is at least one selected from the group consisting of acetic acid  
3        ester solvents which include ethyl acetate, butyl acetate, propylene glycol monomethyl ether  
4        acetate, and propylene glycol monoethyl ether acetate.

1           Claim 16 (previously presented): The method of producing a color filter according to  
2        claim 1, wherein the viscosity of the colored composition is not more than 50 mPa • s.

1           Claim 17 (previously presented): The method of producing a color filter according to  
2        claim 1, wherein the viscosity of the colored composition is not more than 10 mPa • s.

1           Claim 18 (previously presented): The method of producing a color filter according to  
2        claim 1, wherein the transparent substrate has an ink-jet ink receiving layer thereon.

1           Claim 19 (new): A method of producing a color filter according to claim 1, wherein  
2        (d) the compound having a photopolymerizable functional group is at least one selected from the  
3        group consisting of polyfunctional (meth)acrylates including trimethylolpropane  
4        tri(meth)acrylate, pentaerythritol tetra(meth)acrylate, dipentaerythritol hexa(meth)acrylate, and  
5        dipentaerythritol penta(meth)acrylate; and polyfunctional maleimides including  
6        N,N'-4,9-dioxa-1,12-bismaleimidizedecane, ethylene glycol bis(maleimide acetate),

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7 poly(tetramethylene glycol) bis(maleimide acetate), (ethylene glycol modified) pentaerythritol  
8 tetra(maleimide acetate), bis(2-maleimideethyl) carbonate, and  
9 isophoronebisurethanebis(N-ethylmaleimide).

1 Claim 20 (new): The method of producing a color filter according to claim 1, wherein an  
2 energy ray used for photocuring is in the wavelength range of 200 to 500 nm.

1 Claim 21 (new): The method of producing a color filter according to claim 1, wherein  
2 heating temperature for heat-curing is within a range from 150 to 300°C.

1 Claim 22 (new): The method of producing a color filter according to claim 1, wherein the  
2 amount of the compounds having a photopolymerizable functional group is from 25 to 150% by  
3 weight based on the total amount of the binder resins containing an amino resin (a) of the  
4 photopolymerizable colored composition.

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